

REMARKS

Claims 1, 4, 5, 16, 19, 20, 22 and 24 are all the claims pending in the application.

I. Claim Rejections under 35 U.S.C. § 112, second paragraph

Claims 1, 4, 5, 16, 19, 20, 22 and 24 have been rejected under 35 U.S.C. § 112, second paragraph as being indefinite. In particular, the Examiner has indicated that the feature recited in the claims drawn to the cutoff frequency of the signal generator being made constant renders the claims indefinite.

By this amendment, Applicants note that the above-noted feature drawn to the cutoff frequency of the signal generator being made constant has been removed from the claims. Accordingly, Applicants kindly request that the Examiner withdraw the above-noted rejection under 35 U.S.C. 112, second paragraph.

II. Claim Rejections under 35 U.S.C. § 103

Claims 1, 4, 5, 16, 19, 20, 22 and 24 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishii et al. (US 5,280,641).

Claim 1, as amended, recites that the capacitance value of the variable capacitor is controlled according to a gain setting of the gain variable signal generator. Applicants respectfully submit that Ishii does not disclose, suggest or otherwise render obvious the above-noted feature recited in amended claim 1.

Regarding Iishi, Applicants note that this reference discloses an AM radio receiver that is capable of performing automatic tuning. In Iishi, during automatic tuning, an oscillation frequency of a local oscillator 22 is varied in response to the output signal from a PLL circuit 42 (see col. 4, lines 64-66). When a broadcasting station is detected by a station detector 50, the station detector 50 sends the PLL circuit 42 a signal for stopping the frequency variation of the local oscillator signal (see col. 5, lines 31-35). Thereafter, the local oscillation frequency is fixed at the frequency at the moment (see col. 5, lines 34-35).

The PLL circuit 42 then outputs to an RF tuning circuit 20 a tuning signal corresponding to the fixed local oscillator signal, whereby a capacitance of a variable capacitance diode 62 is varied according to the tuning signal so as to set the tuning frequency in the RF tuning circuit 20 (see Fig. 4A and col. 5, lines 35-40). Specifically, in Iishi, it is disclosed that the capacitance of the variable capacitance diode 62 is controlled such that “the tuning frequency in the RF tuning circuit 20 is made 450 KHz smaller than the frequency of the local oscillator 22” (see col. 5, lines 41-43).

Thus, in Iishi, while a capacitance of the variable capacitance diode 62 is controlled such that the tuning frequency in the RF tuning circuit 20 is made 450 KHz smaller than the frequency of the local oscillator 22, Applicants respectfully submit that Ishii does not disclose or suggest the above-noted feature recited in amended claim 1 which indicates that the capacitance value of the variable capacitor is controlled according to a gain setting of the gain variable signal generator.

In view of the foregoing, Applicants respectfully submit that Ishii does not disclose, suggest or otherwise render obvious the above-noted feature recited in amended claim 1. Accordingly, Applicants submit that claim 1 is patentable over Ishii, an indication of which is kindly requested. Claims 4, 5, 22 and 24 depend from claim 1 and are therefore considered patentable at least by virtue of their dependency.

Regarding claim 16, Applicants note that this claim has been amended in a similar manner as claim 1 so as to recite that the capacitance value of the variable capacitor is controlled according to a gain setting of the gain variable signal generator.

For at least similar reasons as discussed above with respect to claim 1, Applicants respectfully submit that Ishii does not disclose, suggest or otherwise render obvious the above-noted feature recited in claim 16. Accordingly, Applicants submit that claim 16 is patentable over Ishii, an indication of which is kindly requested. Claims 19 and 20 depend from claim 16 and are therefore considered patentable at least by virtue of their dependency.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited.

If any points remain in issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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